

Docket No.: M&N-IT-458

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : HARALD BÖTTNER ET AL.
Filed : CONCURRENTLY HEREWITH
Title : METHODS FOR PRODUCING A THERMOELECTRIC LAYER
STRUCTURE AND COMPONENTS WITH A THERMOELECTRIC
LAYER STRUCTURE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. 1.98 copies of the following patents and/or publications are submitted herewith:

U.S. Patent No. 5,885,345 (Sakuragi), dated March 23, 1999;

US Patent No. 5,959,341 (Tsuno et al.), dated September 28, 1999;

U.K. Patent Specification GB 807 619 (Goldsmid), dated January 21, 1959;

German Published Non-Prosecuted Patent Application DE 198 45 104 A1 (Schlereth et al.), dated April 6, 2000, Process for Producing a Thermoelectric Converter, and English abstract thereof;

Magri, P. et al.: "Synthesis, Properties and Performances of Electrodeposited Bismuth Telluride Films", J. Mater. Chem. 1996, pp. 773-779;

Fleural, J.P. et al.: "Development of Thick-Film Thermoelectric Microcoolers Using Electrochemical Deposition", Mat. Res. Soc. Symp. Proc., Materials Research Society, Vol. 545, 1999, pp. 493-500;

Böttner, H. et al.: "New Thermoelectric Components Using Micro-System-Technologies", Thermoelectric Materials, Proceedings 6th Workshop European Thermoelectric Society, Freiburg, 2001, 6 pages;

Venkatasubramanian, R. et al.: "Thin-Film Thermoelectric Devices with High Room-Temperature Figures of Merit", Nature, Macmillan Magazines Ltd, Vol. 413, October 11, 2001, pp. 597-602;

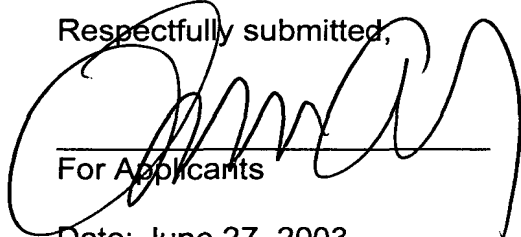
Nurnus, J. et al.: "Epitaxial Bismuthtelluride Layers Grown on (111) Bariumfluoride Substrates Suitable for MQW-Growth", Proceedings 18th International Conference on Thermoelectrics, Baltimore, 1999, 4 pages;

Boikov, Y. A. et al.: "Layer by Layer Growth of Bi₂ Te₃ Epitaxial Thermoelectric Heterostructures", 16th International Conference on Thermoelectrics, Dresden, IEEE, August 1997, pp. 89-92;

Zou, H. et al.: "Preparation and Characterization of p-Type Sb₂ Te₃ and n-Type Bi₂ Te₃ Thin Films Grown by Coevaporation", J. Vac. Sci. Technol. A 19 (3), American Vacuum Society, May/June 2001, pp. 899-903.

If no translation of pertinent portions of any foreign language patents or publications mentioned above is included with the aforementioned copies of those applications, patents and/or publications, it is because no existing translation is readily available to the applicant.

Respectfully submitted,



For Applicants

LAURENCE A. GREENBERG
REG. NO. 29,308

Date: June 27, 2003

Lerner and Greenberg, P.A.
Post Office Box 2480
Hollywood, FL 33022-2480
Tel: (954) 925-1100
Fax: (954) 925-1101

/kf

FORM PTO-1449 (SUBSTITUTE) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (37 CFR 1.98(b))				Attorney Docket No.: M&N-IT-458 Appl. No.: <hr/> Applicant: HARALD BÖTTNER ET AL. <hr/> Filing Date: June 27, 2003 Group Art Unit:			
EXAMINER INITIALS		PATENT NO.	DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE
	A	5,885,345	3/23/99	Sakuragi			
	B	5,959,341	9/28/99	Tsuno et al.			
	C						
	D						
	E						
	F						
	G						
	H						
	I						
FOREIGN PATENT DOCUMENT							
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB CLASS	TRANSL. YES NO
	J	807,619	1/21/59	U.K.			
	K	198 45 104 A1	4/6/00	Germany			
	L						
	M						
	N						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
		Magri, P. et al.: "Synthesis, Properties and Performances of Electrodeposited Bismuth Telluride Films", J. Mater. Chem. 1996, pp. 773-779					
		Fleurial, J.P. et al.: "Development of Thick-Film Thermoelectric Microcoolers Using Electrochemical Deposition", Mat. Res. Soc. Symp. Proc., Materials Research Society, Vol. 545, 1999, pp. 493-500					
EXAMINER				DATE CONSIDERED			

FORM PTO-1449 (SUBSTITUTE) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (37 CFR 1.98(b))				Attorney Docket No.: M&N-IT-458 Appl. No.: <hr/> Applicant: HARALD BÖTTNER ET AL. <hr/> Filing Date: June 27, 2003 Group Art Unit:			
EXAMINER INITIALS		PATENT NO.	DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE
	A						
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						
FOREIGN PATENT DOCUMENT							
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB CLASS	TRANSL. YES NO
	J						
	K						
	L						
	M						
	N						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
		Böttner, H. et al.: "New Thermoelectric Components Using Mirco-System-Technologies", Thermoelectric Materials, Proceedings 6 th Workshop European Thermoelectric Society, Freiburg, 2001, 6 pages					
		Venkatasubramanian, R. et al.: "Thin-Film Thermoelectric Devices with High Room-Temperature Figures of Merit", Nature, Macmillan Magazines Ltd, Vol. 413, October 11, 2001, pp. 597-602					
EXAMINER				DATE CONSIDERED			

FORM PTO-1449 (SUBSTITUTE) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (37 CFR 1.98(b))				Attorney Docket No.: M&N-IT-458 Appl. No.: <hr/> Applicant: HARALD BÖTTNER ET AL. <hr/> Filing Date: June 27, 2003 Group Art Unit:			
EXAMINER INITIALS		PATENT NO.	DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE
	A						
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						
FOREIGN PATENT DOCUMENT							
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB CLASS	TRANSL. YES NO
	J						
	K						
	L						
	M						
	N						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
		Nurnus, J. et al.: "Epitaxial Bismuthtelluride Layers Grown on (111) Bariumfluoride Substrates Suitable for MQW-Growth", Proceedings 18 th International Conference on Thermoelectrics, Baltimore, 1999, 4 pages					
		Boikov, Y. A. et al.: "Layer by Layer Growth of Bi ₂ Te ₃ Epitaxial Thermoelectric Heterostructures", 16 th International Conference on Thermoelectrics, Dresden, IEEE, August 1997, pp. 89-92					
EXAMINER				DATE CONSIDERED			

FORM PTO-1449 (SUBSTITUTE) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (37 CFR 1.98(b))				Attorney Docket No.: M&N-IT-458 Appl. No.: Applicant: HARALD BÖTTNER ET AL. Filing Date: June 27, 2003 Group Art Unit:			
EXAMINER INITIALS		PATENT NO.	DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE
	A						
	B						
	C						
	D						
	E						
	F						
	G						
	H						
	I						
FOREIGN PATENT DOCUMENT							
		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB CLASS	TRANSL. YES NO
	J						
	K						
	L						
	M						
	N						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
		Zou, H. et al.: "Preparation and Characterization of p-Type Sb ₂ Te ₃ and n-Type Bi ₂ Te ₃ Thin Films Grown by Coevaporation", J. Vac. Sci. Technol. A 19 (3), American Vacuum Society, May/June 2001, pp. 899-903					
EXAMINER				DATE CONSIDERED			